



Translation of the Cited Reference (abridged translation)

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Title of Invention: Composition For Scalp And Hair

[0009] The present inventors made intensive studies in order to solve the aforementioned problems. As a result, they found that by formulating acetylated hyaluronic acid in combination with a specified blood circulation promoter, a scalp and hair care composition could be obtained that had superior anti-hair loss effect and ability to prevent dandruff and itch on the scalp, as well as assuring high safety. The present invention has been accomplished on the basis of this finding.

[0024]

[Examples] Now, the invention is described in further detail with reference to examples but they are by no means

intended to limit the invention. In the following examples, all amounts are on a weight percent basis.

[0025] The examples and comparative examples shown in Tables 1 and 2 were tested and evaluated for their efficacy in preventing hair loss and dandruff/itch on the scalp by the following methods. The results are shown in Tables 3 and 4.

[0026] TEST ON ANTI-HAIR LOSS EFFECT

Subjects were asked to wash their hair with and without using the samples (lotions) prepared in the examples and comparative examples and the changes in lost hair counts were determined. All subjects were male and a group consisting of 10 subjects volunteered in each of the examples and comparative examples. The test period was six months, the first two months being a non-sample application period and the ensuing four months a sample application period. During the sample application period, the sample was applied to the scalp twice a day in amounts of 2-4 ml at a time. During the test period, the volunteers washed their hair every other day, the hairs that fell were collected, and the number of fallen hairs was counted for each week. Based on the number of hairs that fell after each washing during the sample application period, the mean value for the last week of the non-sample application

period was compared with the mean value for the last week of the sample application period. The results were evaluated by the following criteria; "effective" cases were such that at least 50% of the subjects were rated + or ++ and other cases were "not effective".

(Criteria for evaluation)

++: very effective since the fallen hair count decreased by at least 70 hairs;

+ : moderately effective since the fallen hair count decreased by at least 40 hairs;

± : slightly effective since the fallen hair count decreased by at least 10 hairs;

- : not effective since the fallen hair count decreased by only less than 10 hairs or even increased.

[0027] TEST ON PREVENTION OF DANDRUFF AND ITCH

The subjects were males who were complaining about dandruff and itch. A group consisting of 10 male subjects volunteered in each of the examples and comparative examples and they were checked for the dandruff and itch after the end of a test. Evaluation was made on the basis of the amount of proteins in the dandruff and the degree of itch sensation. Each sample was applied for three months, during which the volunteers washed their hair once a day with a shampoo containing no sample and they applied the

sample to the scalp twice a day in amounts of 2-4 ml at a time. Upon completion of the test, dandruff was collected from the unwashed head of each volunteer with a vacuum cleaner; the amount of proteins in the collected dandruff was measured and the mean value was taken as the mean amount of dandruff. Each volunteer was also checked for the itch on the head and the values of its degree were evaluated according to the following criteria and averaged.

(Criteria for evaluation)

3: strong itch

2: positive itch

1: slight itch

0: no itch

[0028]

[Table 1]

Table 1

Ingredients	Example									
	1	2	3	4	5	6	7	8	9	10
Acetylated hyaluronic acid	0.01	0.5	1	1	0.001	2	2	3	10	5
Nicotinic acid benzyl ester	0.01	-	-	-	-	-	-	-	-	-
Tocopherol nicotinate	-	0.3	-	-	-	-	-	-	-	0.1
Nicotinic acid	-	-	0.001	-	-	-	-	-	-	-
Swentia herb Extract	-	-	-	0.3	-	-	-	-	-	-
Ginseng extract	-	-	-	-	0.2	-	-	-	-	-
Ginkgolid	-	-	-	-	-	0.1	-	-	-	-
Vitamin E acetate	-	-	-	-	-	-	0.3	-	-	0.5
Minoxidil	-	-	-	-	-	-	-	1.0	-	-
Carpronium chloride	-	-	-	-	-	-	-	-	2.0	-
Dipropylene glycol	1	1	1	1	1	1	1	1	1	1
Hydrogenated castor oil ethylene oxide (40 mole) adduct	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Succinic acid	q.s.	q.s.	q.s.	q.s.	q.s.	q.s.	q.s.	q.s.	q.s.	q.s.
Perfume & Colorant	q.s.	q.s.	q.s.	q.s.	q.s.	q.s.	q.s.	q.s.	q.s.	q.s.
Ethanol(95%)	55	55	55	55	55	55	55	55	55	55
Purified water	bal.	bal.	bal.	bal.	bal.	bal.	bal.	bal.	bal.	bal.

[Table 2]

Table 2

Ingredients	Comparative Example									
	1	2	3	4	5	6	7	8	9	10
Acetylated hyaluronic acid	1.0	-	-	-	-	-	-	-	-	-
Nicotinic acid benzyl ester	-	0.3	-	-	-	-	-	-	-	-
Tocopherol nicotinate	-	-	0.3	-	-	-	-	-	-	-
Nicotinic acid	-	-	-	0.3	-	-	-	-	-	-
Swentia herb Extract	-	-	-	-	0.3	-	-	-	-	-
Ginseng extract	-	-	-	-	-	0.3	-	-	-	-
Ginkgolid	-	-	-	-	-	-	0.3	-	-	-
Vitamin E acetate	-	-	-	-	-	-	-	0.5	-	-
Minoxidil	-	-	-	-	-	-	-	-	3.0	-
Carpronium chloride	-	-	-	-	-	-	-	-	-	2.0
Dipropylene glycol	1	1	1	1	1	1	1	1	1	1
Hydrogenated castor oil ethylene oxide (40 mole) adduct	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Succinic acid	q.s.	q.s.	q.s.	q.s.	q.s.	q.s.	q.s.	q.s.	q.s.	q.s.
Perfume & Colorant	q.s.	q.s.	q.s.	q.s.	q.s.	q.s.	q.s.	q.s.	q.s.	q.s.
Ethanol(95%)	55	55	55	55	55	55	55	55	55	55
Purified water	bal.	bal.	bal.	bal.	bal.	bal.	bal.	bal.	bal.	bal.

[0029] PREPARATION METHOD

Dissolved in 95% ethanol were acetylated hyaluronic acid, a blood circulation promoter, dipropylene glycol, POE hydrogenated castor oil (added in 40 moles), succinic acid and a perfume. Then, a colorant was dissolved in purified water, which was added to the ethanol solution; the mixture was stirred to form a clear liquid lotion.

[0030]

[Table 3]

Table 3

Group		Percentage of subjects who experienced a decrease in the number of fallen hairs				Efficacy in preventing hair loss
		++	+	+—	—	
Comparative Example	1	0	0	20	80	not effective
	2	0	10	10	80	not effective
	3	0	0	30	80	not effective
	4	0	10	20	70	not effective
	5	0	10	10	80	not effective
	6	0	0	20	80	not effective
	7	0	10	20	70	not effective
	8	0	0	20	80	not effective
	9	0	30	10	60	not effective
	10	10	10	10	70	not effective
Example	1	10	50	20	20	effective
	2	20	50	10	20	effective
	3	30	40	20	10	effective
	4	30	30	10	30	effective
	5	20	50	20	10	effective
	6	30	50	10	10	effective
	7	20	50	10	20	effective
	8	40	40	10	10	effective
	9	50	30	20	0	effective
	10	30	40	20	10	effective

[Table 4]

Table 4

Group		Mean amount of dandruff (mg)	Mean itch score
Comparative Example	1	16.29	1.5
	2	18.31	1.5
	3	21.41	2.0
	4	18.81	1.3
	5	22.02	1.6
	6	18.77	1.6
	7	14.95	1.4
	8	16.89	1.7
	9	15.48	1.9
	10	19.48	1.6
Example	1	8.65	0.7
	2	7.53	0.8
	3	6.34	0.6
	4	6.48	0.6
	5	5.61	0.7
	6	8.05	0.4
	7	7.51	0.5
	8	8.42	0.8
	9	7.18	1.0
	10	5.90	0.9

[0031]

As is clear from Tables 3 and 4, the preparations made in Examples 1-10 had superior anti-hair loss effect and ability to prevent dandruff and itch on the scalp.